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A MIDDLE-RANGE RESPONSE: THE NEED FOR MOTORIZED FORCES

An Individual Study Project
Intended for Publication

by

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INTRODUCTION

The United States Army is charged with responding to a wide variety of threats and contingencies throughout the world. In his FY 89 report to the Congress, the Secretary of Defense stated:

The overall goal of our force projection program is to achieve an ability to deploy adequate forces to counter simultaneous Soviet-bloc offensives in Europe, the Pacific region, and Southwest Asia (SWA). The European and SWA deployment requirements...remain our greatest challenge....¹

In order to meet these simultaneous challenges, the available forces must be structured and capable of responding to threats across the entire spectrum of conflict. In recent years the buildup up of special operations and light infantry forces has been targeted against the low end of the spectrum. At the high end is a mixture of mechanized and armored units.

A major concern involves the middle range. What is the threat in this spectrum and do we possess the forces capable of responding to it? If not, why not? And if these forces are needed, how should they be structured and where should they be located-- in the Active Component (AC) or Reserve

Component (RC)? This paper will examine these questions and address the entire issue of middle range response.

THE THREAT

The threat in the middle range of the conflict spectrum primarily involves developing third world military strength. In many of these countries, we no longer see disorganized and ill-equipped units but modern, well trained and equipped forces fully capable of operating in the middle and low range of the spectrum. In the middle range, we are talking about countries with terrain capable of supporting heavy armored and mechanized forces. These forces have generally been organized along the lines of the Soviet model with emphasis on tactical mobility, shock action and weapon lethality. To illustrate this growing threat, a compilation of tanks and armored systems currently in the hands of a number of these countries is listed below.²

Country	Personnel	Tanks	Armored Carriers
Iran	1,650,000	1,100	2,000
Iraq	1,035,000	5,500	5,000
Libya	115,000	2,800	2,000
Syria	606,000	4,100	3,800

The growth of these developing countries is a result of carefully nurtured Soviet surrogate relationships, such as

Iraq and Libya, as well as captured U.S. military equipment as in the case of Iran and Vietnam. Access to a thriving world arms market provides yet another source. With the numbers and types of heavy threat forces available, we must be prepared to fight essentially a mid-intensity conflict in the third world. The Army's capstone manual, FM 100-5, describes this as follows:

...mid-intensity battlefields are likely to be chaotic, intense, and highly destructive. They will probably extend across a wider space of air, land, and sea than previously experienced. ...forces must be prepared to fight campaigns of considerable movement, not only to reduce vulnerability, but also to obtain positional advantage over the enemy. Rapid movement will be complemented by the use of advanced, highly lethal weapons throughout the battle area.³

Key here are references to movement and lethality. Due to the increasing sophistication of the enemy, these capabilities must not only be countered but be present in our own force structure as well. In addition, we must also take into consideration the distances involved to the various threat areas. These are considerable and will impact on our ability to project forces rapidly and in sufficient quantity. As an example, the air mileage from the east coast of the United States to Baghdad and Teheran is in excess of 6,000 miles.⁴

AVAILABLE FORCE STRUCTURE

Thus far we have seen that in order to meet this mid-spectrum threat our forces must be structured and

properly equipped to be strategically deployable, tactically mobile, survivable, and highly lethal. Let us now examine the divisional-sized forces presently available to the total Army and their capabilities. In terms of raw combat power, the total Army is comprised of the following twenty-eight divisions:⁵

Active Component (AC):

<u>Number</u>	<u>Unit Designation</u>	<u>Type Division</u>
6	1st, 3rd, 4th, 5th, 8th, and 24th	Mechanized Infantry
4	1st, 2d, 3d, and 1st Cav	Armored
4	6th, 7th, 10th, and 25th	Light Infantry
1	9th	Motorized Infantry (Now converting to mechanized)
1	2d	Infantry
1	101st	Airmobile
<u>1</u>	82d	Airborne
18	Sub Total	

Reserve Component (RC):

<u>Number</u>	<u>Unit Designation</u>	<u>Type Division</u>
2	35th and 40th	Mechanized Infantry
2	49th and 50th	Armored
1	29th	Light Infantry
	26th, 28th, 38th, 42d, and 47th	Infantry
<u>5</u>		
10	Sub Total	
28	Total	

Of the active divisions, five (1st AD, 3d ID, 3d AD, 8th ID and 2d ID) and brigades of two more (1st ID and 2d AD) are permanently deployed in the major high threat areas of Europe and Korea. The remainder are positioned in CONUS, Hawaii and Alaska. The 6th Division in Alaska is specifically trained and equipped to fight in that region. Excluding those divisions given specific regional responsibility, realistically, ten divisions are available for world wide response. Of those ten, four, including the 9th Division, are mechanized; one, armored; four, light infantry; one, airmobile; and one, airborne. On the Reserve Component (RC) side, all of the combat divisions are National Guard units available only when mobilized and federalized.

Although these forces are available for world-wide commitment, rapid-reinforcement of NATO requires us to deploy within ten days of a decision to mobilize, a total of ten Army divisions.⁶ With that additional commitment, the types and numbers of divisions available for simultaneous response drops dramatically.

CAPABILITIES AND WEAKNESSES OF PRESENT FORCE STRUCTURE

Both AC and RC divisions are now undergoing modernization programs which will significantly upgrade their warfighting capabilities. The heavy divisions are in

various stages of being outfitted with such lethal weaponry as the M1A1 Main Battle Tank, the M2/M3 Bradley Fighting Vehicle, the UH-60 Blackhawk and AH-1 Apache helicopters, and the Multiple Launcher Rocket System (MLRS). All of these have significantly increased mobility, lethality and survivability but at the expense of rapid strategic deployability due to increased weight.

The 101st, our only airmobile division, has also received new equipment in the form of the upgraded CH-47D with increased lift capability as well as Blackhawk and Apache helicopters. These upgrades have significantly enhanced their tactical mobility and lethality, improved their survivability, and at the same time retained their ability for rapid deployment. The AC infantry divisions and the 29th Infantry Division of the RC have been restructured to light infantry, going from 18,000 men to 10,500 men. This reconfiguration has been done to generate additional divisions as well as enhance responsiveness and strategic deployability. These gains, however, come at the expense of tactical mobility, survivability, and lethality in the mid-range of conflict.

The 82d Airborne Division remains essentially the same, with modest enhancements in artillery with the addition of the improved M119, 105 mm light howitzer. This division also continues as the nation's "fire brigade" and, as such, is the most responsive but also the most committed. Being the

most responsive, however, does not necessarily equate to being the most capable for all types of missions. In return for its rapid response and force projection capabilities there are significant trade-offs in terms of tactical mobility, lethality and survivability.

The remaining five National Guard infantry divisions continue to be manpower intensive with a poor tooth-to-tail ratio but are scheduled to be converted to the Army of Excellence "L" series TOE in the next five years.⁷ Although this will make them more strategically deployable, they will still suffer from a lack of antiarmor punch and tactical mobility once in theater.

AN ALTERNATIVE--MOTORIZATION

After examining the forces available, it appears that few are truly capable of responding to and sustaining themselves in the middle spectrum. They are essentially either too heavy or too light. In motorization lies an alternative that could give us the balance needed to operate not only in the middle but throughout the conflict spectrum. A motorized force is simply one designed around the use of lightweight, wheeled vehicles equipped with heavy antitank weapons. By employing lightweight vehicles, the force is not only strategically deployable by air but has the requisite mobility and firepower once in the objective area. Wheeled

vehicles also provide a stable, mobile platform capable of supporting heavy antiarmor weapons such as missiles and direct fire guns.

There is precedence for the motorization of forces. In fact, the Soviet Union presently has the largest motorized force in the world, while substantial numbers are also found in such world powers as France, Canada and many third world countries. The U.S. has also dabbled in these forces, with the most recent examples being three battalions of the Marine Corps and the Army's 9th Infantry Division.⁸

ADVANTAGES AND DISADVANTAGES OF MOTORIZATION

Motorized forces offer several advantages, eight of which clearly stand out. These are responsiveness, strategic deployability, mobility, lethality, sustainability, affordable, versatility, and flexibility. Each of these qualities bear some slight explanation in turn. In terms of responsiveness, motorized forces are second to none. Not only can they self deploy, but they can also move at speeds in excess of 60 MPH on major roadways. Rapid strategic deployment is possible due to the use of lightweight wheeled vehicles. This enables the force to be projected by air alone, thus, deleting any requirement for critical sealift assets needed to project heavy forces to Europe. Critical to success in the objective area is tactical mobility. With it,

the ground commander can maneuver his forces and bring to bear his full combat power at the time and place of his choosing. Additionally, by using lightweight vehicles, the force commander can either maneuver on the ground or be transported around the battlefield by helicopter. This freedom of maneuver provides the commander with the ability to execute three key tenets of Airland Battle Doctrine: agility, synchronization, and depth.⁹

The motorized force also possesses the lethality to do the job in a mid to high intensity conflict. Wheeled vehicles, coupled with such weapons as the U.S. produced TOW II or the European made HOT missile system, enable the force commander to proliferate the battlefield with highly effective and long-range antiarmor fire. With such built-in mobility, the antiarmor systems can be rapidly placed to best advantage and quickly moved after firing to enhance survivability. To be truly effective, however, the force must also be sustainable. Here, the reliability of motorized forces gets high marks. As an example, Canadian forces estimate that operating costs of their six wheeled armored carriers are less than one-half of their tracked fleet.¹⁰ Additionally, because of their light weight, wheeled armored vehicles can be powered by engines designed and produced for commercial trucks and other non-military uses.¹¹ The availability and commonality of truck parts worldwide provides obvious advantages. Experience with the U.S. Marine

Corps Light Armored Vehicle (LAV) has also produced remarkable reliability data. Initial requirements called for the mean miles between failures (MMBMF) to be 1,250 miles. After 24-30,000 miles of service, the MMBMF average was an amazing 4,209 miles.¹²

A motorized force is also very affordable when compared to a mechanized or armored force. As an example, the basic Bradley Fighting Vehicle, a tracked system, costs about \$1.2 million while a comparable wheeled tactical vehicle, such as the Marine's LAV, costs about \$600,000 dollars. A motorized force is also cost-effective in terms of manpower savings because the force structure must necessarily be kept lean to be responsive and still deployable by air. As an example, a motorized division such as the 9th Infantry is organized at a little over 13,000 soldiers while a mechanized division stands at over 15,000. The initial cost of motorizing a unit is also affordable because of the variety of off-the-shelf vehicles available for purchase on the open market. Besides the LAV, there are many vehicles produced by such diverse countries as Austria, Brazil, Spain, and the United States. This plethora of vehicles negates the requirement for substantial investments in R&D, tooling up, and production facilities.

A motorized force is also versatile and flexible. It is versatile in that the force can either fight mounted or dismounted. Such a force also gives the ground commander the

flexibility to task organize and interoperate with heavy or light forces.

Although these advantages are significant, there are a few disadvantages that must be discussed. These are survivability and the absence of an effective, direct fire Assault Gun System (AGS). In order to achieve strategic mobility, motorized forces must be equipped with lightweight, thin-skinned vehicles. This tradeoff translates into little armored protection and makes the force extremely vulnerable to both direct and indirect fire. This disadvantage can be offset to a certain degree by the vehicles inherent mobility and speed. In other words, speed and agility are keys to survival.

Another criticism leveled against the motorized force is the absence of a fully developed and effective Assault Gun System. To be effective against today's armor, an assault gun must be at least 105mm and capable of firing the complete inventory of armor defeating munitions. The platform required to handle the weight and recoil of such a weapon moves it quickly from a wheeled to a tracked vehicle. This requirement translates to weight, size, and decremented deployability. A key question then is whether an assault gun is essential for motorized success. Even if fully developed, the assault gun would still give little in the way of advantage over enemy armor, either in range or armor protection.

Antiarmor missile systems such as the TOW II and HOT are solutions presently available. They are lightweight, can be ground or vehicular mounted, are day/night fire capable, and can engage enemy armor at opening ranges in excess of 3700 meters as compared to a tank's effective range of 2000+ meters. On the other side, shortcomings include lack of armor protection as well as the slow speed of the missile. At 3750 meters, the missile takes approximately seventeen seconds to reach the target and at 2000 meters approximately ten seconds.¹³ In comparison, a kinetic-energy round fired at 2000 meters from a tank's main gun reaches the target in a little over one second.¹⁴

A MOTORIZATION CANDIDATE-- THE NATIONAL GUARD

The final question then is, if we need a middle range motorized force, who should get the mission? Recently, the Army Chief of Staff decided to drop the motorized concept for AC forces with his decision to convert the 9th Infantry Division from motorized to mechanized. His decision was based on the lack of Congressional appropriations for the purchase of what he described as key pieces of equipment, such as an Assault Gun System (AGS) and a lightweight reconnaissance Fast Attack Vehicle (FAV). Without these systems, the Chief of Staff felt the missions assigned the division could not be accomplished. He was also concerned

with building yet another one-of-a-kind division such as the 82d Airborne or the 101st Airmobile.¹⁵ Key here is that the decision to convert the 9th Infantry Division was not made because the motorized concept was faulty but because of budget constraints and inappropriate missions.

The fact remains, this nation needs a responsive, strategically deployable force capable of operating against heavy armored forces in the middle of the conflict spectrum. It is unrealistic to assume the Chief of Staff will reverse his AC decision, but there are alternatives. One would be to motorize Reserve Component forces. Likely candidates include the five National Guard, "straight leg", infantry divisions. These units are readily available and sorely in need of restructuring to meet the demands for strategic deployability and lethality required in modern warfare. Motorizing these divisions would benefit not only the National Guard but the Total Army as well. The major benefit would be that the motorized structure and hence the capability to operate in the middle range of the spectrum, would be retained in the force structure. Additionally, the National Guard would be significantly aided in accomplishing both state and federal missions with the increased mobility, especially the self-deployment capability.

To make this a reality, the Army, as well as the Congressional leadership, would have to be shown the motorized division can do the job without the purchase of

expensive, non-developmental items such as the AGS or FAV. The fact is, the evidence is available right now. The 9th Infantry Division's first brigade-sized rotation at the National Training Center (NTC) in 1988 clearly showed the ability of a motorized force to fight and win in a mid intensity environment.¹⁶ Additionally, the motorized brigade accomplished its missions using off-the-shelf, "hybrid" systems such as the TOW II mounted atop the Army's standard 1 and 1/4 ton utility vehicle, the HMMWV. The incorporation of these standard pieces of equipment defuses the concern about making a new, unique type of division not using equipment commonly found in other units. It appears one of the keys to the 9th Division's success at NTC was the recognition that missions assigned had to be realistic and take into consideration both the strengths and vulnerabilities of motorization. Although desirable, the lack of AGS and FAV systems did not affect the final outcome of missions assigned.

CONCLUSION

The forces of the United States Army are well structured to meet the changing threat at both the low and high ends of the spectrum of conflict. They are however poorly organized to meet and defeat a heavy armor threat in the middle. This mid-range area is the domain of many

developing third world nations equipped with modern, well trained, and often sophisticated armored forces. To meet this threat, it is critical that the total Army be properly structured and organized. That means having a strategically deployable force possessing not only the lethality to defeat heavy armored forces but tactical mobility as well. An answer is the formation of motorized divisions structured to meet that need. What these divisions would provide are forces capable of plugging the middle of the conflict spectrum to give this nation a versatile, middleweight capability. In sum, motorization is simply the right force, at the right time, for all the right reasons.

ENDNOTES

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